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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/707,578	11/06/2000	Grzegorz J. Czajkowski	5181-76000/P5352	9652

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EXAMINER

NGUYEN, VAN H

ART UNIT

PAPER NUMBER

2126

DATE MAILED: 05/21/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

8

Office Action Summary

Application No.

09/707,578

Applicant(s)



Examiner

VAN H NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-24 are presented for examination.
2. It is noted that applicants have other related application, now U.S. Patent No.6,567,974 (filed on February 25, 2000). It is requested that any related application be referred in the first sentence of the specification. Applicants are also requested to supply the serial numbers of any related applications currently pending before the U.S. Patent & Trademark Office.

Specification

3. The abstract of the disclosure is objected to because *it exceeds the limit of 150 words*. Correction is required. See MPEP § 608.01(b).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. CIT. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Uogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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5. A timely filed terminal disclaimer in compliance with 37 C.F.R. ' 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. ' 1.78(d).

6. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

7. Claim 1 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of **U.S. Patent 6,567,974** in view of **Aridor et al.** (U.S. 6,618,737). Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both claiming: *extracting one or more static fields; creating a separate copy of the one or more static fields for each of the plurality of applications that utilizes the class, wherein each of the separate copies corresponds to one of the plurality of applications; creating one or more access methods for the one or more static fields, wherein the access methods are operable to access the corresponding separate copy of the one or more static fields based upon the identity of the utilizing application.* The only difference between the instant application and patent '974 is the instant application further recites *initializing each separate copy of the static fields once*. For the step initializing each separate copy of the static fields once, Aridor suggests "as with static fields...a putfield that initiates an invalidation is not complete until the field is invalidated in all the nodes, and the new value of the field is written in the master instance object" (col.18, lines 3-14). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Aridor and patent '974 because Aridor's teaching would have provided the capability for preserving Java's

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memory consistency model. Therefore, optimizing local execution of methods that access cached fields in the distributed computing system.

8. As to the remaining claims 2-24, they are also rejected under obvious type double patenting as stated in claim 1 above.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made

10. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Aridor et al.** (U.S. 6,618,737).

11. As to claim 1, Aridor teaches the invention substantially as claimed including a method for sharing a class among a plurality of applications in a multitasking computer system (*abstract and col. 5, lines 31-47*), the method comprising:

- extracting one or more static fields from the class (*col.10, lines 1-13; col.11, lines 1-35; col. 12, lines 25-47; and col.16, lines 15-32*);

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- creating a separate copy of the one or more static fields for each of the plurality of applications that utilizes the class, wherein each of the separate copies corresponds to one of the plurality of applications (*col.13, lines 5-65; col.16, lines 15-32; and col.21, lines 1-14*);and

- creating one or more access methods for the one or more static fields, wherein the access methods are operable to access the corresponding separate copy of the one or more static fields based upon the identity of the utilizing application (*col.14, lines 44-67 and col.31, line 49-col.32, line 5*).

While teaching creating a separate copy of the one or more static fields, Aridor does not explicitly teach “initializing each separate copy of the static fields once.”

Aridor, however, discloses “*as with static fields...a putfield that initiates an invalidation is not complete until the field is invalidated in all the nodes, and the new value of the field is written in the master instance object*” (*col.18, lines 3-14*).

It would have been obvious to one of ordinary skill in the art to have applied the teaching of Aridor for “*initializing each separate copy of the static fields once*” in order to preserve Java’s memory consistency model. Therefore, optimizing local execution of methods that access cached fields in the distributed computing system.

12. As to claim 2, Aridor teaches embedding in a class constructor one or more instructions for performing the initializing each separate copy of the static fields; and executing the class constructor once for each separate copy of the static fields (*col.12, line 50-col.13, line 65*).

13. As to claim 3, Aridor teaches loading a template class for each separate copy of the static fields (*col.10, lines 1-30 and col.12, lines 25-39*), wherein the template class comprises a static

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initializer for one of the separate copies of the static fields; and executing the static initializer once for each separate copy of the static fields (*col.29, lines 32-45*).

14. As to claim 4, Aridor teaches renaming the template class with a substantially unique name for each separate copy of the static fields (*col.13, lines 5-65*).

15. As to claim 5, storing the renamed template class on a storage medium is inherent to the system of Aridor.

16. As to claim 6, Aridor teaches associating a class loader with each of the plurality of applications, wherein each class loader is executable to perform the loading the template class for each separate copy of the static fields (*col.10, lines 1-30 and col.12, lines 25-39*).

17. As to claim 7, Aridor teaches wherein the multitasking computer system comprises a virtual machine, and wherein the applications are executable by the virtual machine (*e.g., virtual machine; abstract and col.9, lines 39-67*).

18. As to claim 8, Aridor teaches the plurality of applications are executable in a platform-independent programming environment (*e.g., Java; abstract and col.9, lines 39-67*).

19. As to claims 9-16, note the rejection of claims 1-8 above. Claims 9-16 are the same as claims 1-8 except claims 9-16 are carrier medium claims and claims 1-8 are method claims.

20. As to claims 17-24, note the rejection of claims 1-8 above. Claims 17-24 are the same as claims 1-8 except claims 17-24 are system claims and claims 1-8 are method claims.

Conclusion

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21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ye et al. (U.S. 6701334) teaches "Methods and apparatus for implementing individual class loaders."

- Czajkowski (U.S. 6567974) teaches "System and method for minimizing inter-application interference among static synchronized methods."

- Czajkowski (U.S. 6557168) teaches "System and method for minimizing inter-application interference among static synchronized methods."

- Bak et al. (U.S. 6510437) teaches "Method and apparatus for concurrent thread synchronization"

- Keyes (U.S. 6453460) teaches "Computer system with single processing environment for executing multiple application programs."

- Gee et al. (U.S. 6374286) teaches "Real time processor capable of concurrently running multiple independent JAVA machines."

- Dice et al. (U.S. 6141794) teaches "System and method for synchronizing access to shared variables in a virtual machine in a digital computer system."

- Lindholm et al. (U.S. 6108754) teaches "Thread-local synchronization construct cache."

- DeMaster (U.S. 6066181) teaches "Java native interface code generator."

- Dangelo (U.S. 5946487) teaches "Object-oriented multi-media architecture."

- Zalzala et al. "MTGP: a multithreaded Java tool for generic programming applications"

1999 IEEE, pp. 904-912.

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22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H NGUYEN whose telephone number is (703) 306-5971. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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